

From: [Cora, Lori](#)
To: ["Dunn, Loren"](#)
Cc: [Koch, Kristine](#)
Subject: FW: FS Information Requests
Date: Tuesday, November 03, 2015 2:40:08 PM
Attachments: [2015-11-03 Fig3-03-40_Sediment Management and Disposal Decision Tree.pdf](#)
[HxCDF_UCL.xlsx](#)
[HxCDF_UPL.xlsx](#)
[HxCDF_outlier.xlsx](#)
[HxCDF_Q-Q.bmp](#)
[Annotated Riverbank Quantity Calculations Pages 179-181 from Portland Ha....pdf](#)
[DF congener upriver data no SOM.xlsx](#)

Hello, Loren. I am forwarding to you an email and attachments that Kristine just sent to the LWG Project Managers that respond to the high priority information requested by the LWG. Kristine and I can discuss the other information requested by the LWG in a conference call between 9 – 11 a.m. on Friday, November 13th or between 10 and Noon on Tuesday, November 24th. Let us know if either of those days work for you and the LWG technical representatives.

Lori Houck Cora | Assistant Regional Counsel
U.S. Environmental Protection Agency | Region 10
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From: Koch, Kristine
Sent: Tuesday, November 03, 2015 2:23 PM
To: Carl Stivers <cstivers@anchorqea.com>; Jim McKenna (jim.mckenna@verdantllc.com) <jim.mckenna@verdantllc.com>; Bob Wyatt (rjw@nwnatural.com) <rjw@nwnatural.com>
Cc: Cora, Lori <Cora.Lori@epa.gov>; Allen, Elizabeth <allen.elizabeth@epa.gov>; Grandinetti, Cami <Grandinetti.Cami@epa.gov>; Zhen, Davis <Zhen.Davis@epa.gov>; Jen Woronets <jworonets@anchorqea.com>; Coffey, Scott <CoffeySE@cdmsmith.com>
Subject: RE: FS Information Requests

Carl – Here is the FS information you requested per our conversation last week.

- #8 (PTW assignments) – EPA is providing the latest updates to the disposal decision tree; however, internal reviews and additional modifications are still being made to this document.
- #11 (RCRA Hazardous Waste) – See response to #8.
- #17 (Dioxin/Furan RALs) – EPA is providing the ProUCL output files for HxCDF. Background concentrations for other dioxin/furan congeners was established as the 95th percentile of the various detection limits in the background data set. Those calculations are provided on Sheet 2 of the attached file.
- #18 (PeCDD RALs) – See response to #17/
- #19 (TPAH RALs) – EPA is providing the basis and calculations for PRG on Figure 3.3-2 The charts relate cPAHs as BAP equivalents (BaPEq) by the formula: $PAH = BaPEq^m \cdot 10^b$, where $b = 0.996$ and $m = 0.984$. Inserting 106 as the BaPEq concentration returns 974 as the total PAH PRG (970 to 2 significant figures).
- #20 (Benthic risk “toxicity points”) – The basis for EPA only including bioassay and LRM toxicity points but not FPM toxicity points in the draft FS was based on the best professional judgement of EPA’s ecological risk assessor. However, EPA has re-evaluated this decision and will be including the FPM toxicity points from the BERA in the FS evaluation.
- #22 (Riverbanks) – EPA is providing an annotated excerpt from our Appendix G that provides the information on how volumes were calculated.
- #28 (Construction duration assumptions) – EPA is providing capping rate assumptions and CDF construction times. The primary capping assumptions used in the FS is as follows:
- 1) Engineered caps are assumed to contain 4,800 CY of capping materials per acre.

2) Cap/EMNR placement rate assumes 1,500 CY of material placed per day per placement plant. Construction duration calculations assume 3 plants operating 6 days per week with 1 day of maintenance per week for the 122 day in-water work window.

3) Cap and EMNR construction is assumed to follow dredging for purposes of estimating total construction duration

4) The development of a CDF is assumed to occur in parallel with dredging.

#32 (Residual risk) - As described in Appendix H, residual risk estimates were developed on a rolling river mile basis with the river subdivided into east, west and navigation channel segments. For RAOs 1, 2 and 6, a 1 river mile exposure length was used to develop 3 individual exposure areas per 0.1 river mile (i.e., RM 3.0 – 4.0, east, navigation channel and west; RM 3.1 – 4.1 east, navigation channel and west; 3.2 – 4.2 east, navigation channel and west; etc.). For RAO 5, a 0.2 river mile exposure length was used to develop 3 individual exposure areas per 0.1 river mile (i.e., RM 3.0 – 3.2, east, navigation channel and west; RM 3.1 – 3.3 east, navigation channel and west; 3.2 – 3.4 east, navigation channel and west; etc.).

Within each exposure area, post-remediation surface sediment concentrations were assigned to remediated areas and used in conjunction with existing surface sediment concentrations for unremediated areas to develop a post-remediation surface weighted average concentration (SWAC). This step was performed for each rolling river mile exposure area. Residual risk estimates were estimated for each rolling river mile exposure area as a fraction of the risk within each SDU. Equations used for the calculations:

- $SWAC = \sum_{i=1}^n A_i \times C_i / \sum_{i=1}^n A_i$
- $Residual\ Risk = Post\ Remediation\ Risk = (Post-Remediation\ SWAC) / (Pre-Remediation\ SWAC) * (Pre-Remediation\ Risk)$

#38 (Areas and volumes associated with technology assignments) – EPA is providing the following URL to download the associated attachments for this response.

(<https://files.cdmsmith.com/guestaccess.aspx?OrgID=8113&language=en&arg06=321d8144-eb0d-4622-91ae-fd7630b23ab8>)

Use the following password when prompted:

46J{d

#39 (Cost estimates per SMA or SDU) – EPA does not have cost estimates on an SMA or SDU basis. Costs were developed for the entire site.

Request for Corrected Information

#5 (information related to areas downstream of RM 1.9) – EPA is confirming that areas downstream of RM 1.9 are not being included in the FS analysis. This will be reflected in the updated versions of the FS that EPA will be sharing in the near future.

Kristine Koch
Remedial Project Manager
USEPA, Office of Environmental Cleanup

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From: Carl Stivers [<mailto:cstivers@anchoragea.com>]

Sent: Wednesday, October 28, 2015 12:48 PM

To: Koch, Kristine <Koch.Kristine@epa.gov>

Subject: RE: FS Information Requests

Kristine – We would like to get the July versions as soon as possible. We would also like to see the December

versions when those are available. Thanks.

Carl

Carl Stivers

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From: Koch, Kristine [<mailto:Koch.Kristine@epa.gov>]

Sent: Tuesday, October 27, 2015 9:43 AM

To: Carl Stivers

Subject: RE: FS Information Requests

#38

Carl, we have made several changes to this since the release in July and are continuing to make changes. Do you want the version that would match the July release or do you want us to send this with the revised FS that we anticipate releasing in December?

Kristine Koch
Remedial Project Manager
USEPA, Office of Environmental Cleanup

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From: Carl Stivers [<mailto:cstivers@anchorqea.com>]

Sent: Wednesday, October 21, 2015 10:27 AM

To: Koch, Kristine

Subject: RE: FS Information Requests

Kristine – I will give you a call at 11 am today. Just to make our call a little more efficient, below are the specific requests that I wanted to discuss with you today. The numbers follow the numbering of the full September 8 information request (attached). Thanks.

[Information Needs to Enable Review of EPA's Revised FS Sections 3 and 4](#)

#8 (PTW assignments)

#11 {RCRA Hazardous Waste}

#17 (Dioxin/Furan RALs)
#18 (PeCDD RALs)
#19 (TPAH RALs)
#20 (Benthic risk "toxicity points")
#22 (Riverbanks)
#28 (Construction duration assumptions)
#32 (Residual risk)
#38 (Areas and volumes associated with technology assignments)
#39 (Cost estimates per SMA or SDU)

Request for Corrected Information

#5 (information related to areas downstream of RM 1.9)

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From: Carl Stivers
Sent: Tuesday, October 20, 2015 2:19 PM
To: 'Koch, Kristine'
Subject: RE: FS Information Requests

Can I call you at your desk at 11 am tomorrow? Thanks.

Carl Stivers

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From: Koch, Kristine [<mailto:Koch.Kristine@epa.gov>]
Sent: Tuesday, October 20, 2015 2:11 PM
To: Carl Stivers
Subject: RE: FS Information Requests

Carl – I'm available between 11 and 2 tomorrow.

Kristine Koch
Remedial Project Manager
USEPA, Office of Environmental Cleanup

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From: Carl Stivers [<mailto:cstivers@anchorqea.com>]

Sent: Monday, October 19, 2015 2:06 PM

To: Koch, Kristine

Subject: FS Information Requests

Kristine – Per our conference call last Friday, I would like to arrange a time to discuss the LWG FS information requests with you. I am available all day tomorrow (Tuesday October 20) and all day Wednesday (Oct 21). Please let me know of a good time to call you (and appropriate number).

I am on call for jury duty on Thursday and Friday, so I am hoping we can connect up before then. Thanks much.

Carl

Carl Stivers

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